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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/557,382	04/25/2000	Andrew Trosien	AT00072	8250

7590 10/28/2002  
Align Technology, Inc.  
851 Martin Avenue  
Santa Clara, CA 95050

EXAMINER	
FRENEL, VANEL	
ART UNIT	PAPER NUMBER
3626	

DATE MAILED: 10/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/557,382

Applicant(s)

TROSSEN ET AL.

Examiner

Vanel Frenel

Art Unit

3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Notice to Applicant***

**1.     *This communication is in response to the application filed 25 April 2000.***

***Claims 1-25 are pending.***

***Claim Rejections - 35 USC § 102***

2.     The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3.     Claims 11,13-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Joao (6,283,761).

(A) As per claim 11, Joao discloses a virtual health-care treatment system, comprising:  
a network to communicate information relating to the community; one or more patients coupled to the network (Col.18, lines 50-65; Col.20, lines 40-50);  
one or more treating professionals coupled to the network (Col.14, lines 13-67 to Col.15, line 17; Col.20, lines 13-67); and

Art Unit: 3626

a server coupled to the network, the server validating data entry relating to a patient treatment plan and visualizing patient data in response to a user request (Col.14, lines 49-67; Col.15, lines 1-67 to Col.16, line 65).

(B) As per claim 13, Joao discloses the community wherein the treating professionals include dentists or orthodontists (Col.17, lines 25-30).

(C) As per claim 14, Joao discloses the community further comprising one or more partners coupled to the network (Col.16, lines 6-67; Col.17, line 1-31; Col.19, lines 32-67).

(D) As per claim 15, Joao discloses the community wherein the patients and the treating professionals access the server using browsers (Col.40, lines 13-67; Col.41, line 32).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-10, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joao (6,283,761) in view of Andreiko et al (5,683,243).

(A) As per claim 1, Joao discloses an dental treatment planning system, comprising:  
an input form to receive one or more dental patient inputs (Col.25, lines 1-67). Joao does not explicitly disclose an engine adapted to receive the dental patient data from the input form and validating the dental patient data in a predetermined sequence.

Art Unit: 3626

However, this feature is known in the art, as evidenced by Andreiko. In particular, Andreiko suggests an engine adapted to receive the dental patient data from the input form and validating the dental patient data in a predetermined sequence (See Andreiko Col.21, lines 48-67 to Col.22, line 56).

It would have been obvious to one of ordinary skill in the art at time of the invention to have included the feature of Andreiko within Joao 's apparatus with the motivation of providing a custom orthodontic appliance which fabricated under the control of a computer directly from data from the teeth and/or jaw of a patient or a model thereof. The appliance so formed, when connected to the teeth of the patient to precise calculated finish positions without the need for the orthodontist to bend archwires over the course of the treatment. As a result, the orthodontist's time is conserved, the treatment of the patient is achieved in a shorter amount of time and the finish positions of the teeth are more nearly ideal (See Andreiko Col.6, lines 20-30).

(B) As per claim 2, Andreiko discloses the system wherein the engine prompts the user for additional data based on previous entries (Col.12, lines 48-67 to Col.13, line 53; Col.33, line3s 33-65).

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

(C) As per claim 3, Andreiko discloses the system wherein the treatment includes a diagnostic phase, a goal phase and a treatment path determination phase (Col.13, lines 20-42).

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

(D) As per claim 4, Andreiko discloses the system wherein the engine checks validity for data entered intraphase (Col.13, lines 20-42).

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

Art Unit: 3626

(E) As per claim 5, Andreiko discloses the system wherein validity is determined by crosschecking against a mutually exclusive condition (Col.14, lines 54-67 to Col.15, line 37).

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

(F) As per claim 6, Andreiko discloses the system wherein the engine checks validity for data entered interphase (Col.13, lines 20-42).

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

(G) As per claim 7, Andreiko discloses the system wherein the engine checks whether the treatment results in an improvement in the patient (Col.3, lines 51-58; Col.6, lines 20-33)

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

(H) As per claim 8, Andreiko discloses the system wherein the engine checks whether the treatment meets an efficiency guideline (Col.3, lines 36-64).

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

(I) As per claim 9, Andreiko discloses the system wherein the engine checks whether the treatment meets a prudency guideline (Col.3, lines 36-64).

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

Art Unit: 3626

(J) As per claim 10, Andreiko discloses the system further comprising an appliance having one or more properties, wherein the engine checks the treatment plan against properties of the appliance (Col.3, lines 59-67 to Col.4, line 37; Col.14, lines 4-49).

(K) As per claim 12, Andreiko discloses the community wherein the treating professional views one or more of the following patient data visualization over the network:

a right buccal view; a left buccal view; a posterior view; an anterior view;

a mandibular occlusal view; a maxillary occlusal view; an overjet view;

a left distal molar view; a left lingual view;

a lingual incisor view; a right lingual view;

a right distal molar view; an upper jaw view;

and a lower jaw view (See Andreiko Col.1, lines 33-65; Col.15, lines 19-55).

The motivation for combining the respective teachings of Joao and Andreiko are as discussed above in the rejection of claim 1, and incorporated herein.

(L) As per claim 16, Joao discloses a method for performing dental treatment planning, comprising: receiving one or more dental patient inputs (Col.25, lines 1-67). Joao does not explicitly disclose validating the dental patient data in a predetermined sequence.

However, this feature is known in the art, as evidenced by Andreiko. In particular, Andreiko suggests an engine adapted to receive the dental patient data from the input form and validating the dental patient data in a predetermined sequence (See Andreiko Col.21, lines 48-67 to Col.22, line 56).

It would have been obvious to one of ordinary skill in the art at time of the invention to have included the feature of Andreiko within Joao 's apparatus with the motivation of providing a custom orthodontic appliance which fabricated under the control of a computer directly from data from the teeth and/or jaw of a patient or a model thereof. The appliance so formed, when connected to the teeth of the patient to precise calculated finish positions without the need for the orthodontist to bend archwires over the course of the treatment. As a result, the orthodontist's time is conserved, the treatment of the patient

Art Unit: 3626

is achieved in a shorter amount of time and the finish positions of the teeth are more nearly ideal (See Andreiko Col.6, lines 20-30).

(M) Claims 17-25 recite the underlying process of the elements of claims 2-10, and respectively. As the various elements of claims 2-10 have been shown to be either disclosed by or obvious in view of the collective teachings of Joao and Andreiko, it is readily apparent that the apparatus disclosed by the applied prior art performs the recited underlying functions. As such, the limitations recited in claims 17-25 are rejected for the same reasons given above for system claims 2-10, and incorporated herein.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited but not applied art teaches method for use in dental articulation (6,322,359); methods for manufacturing a dental implant drill guide and a dental implant superstructure (5,725,376); and method and apparatus for designing an orthodontic apparatus to provide tooth movement (6,350,120).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanel Frenel whose telephone number is 703-305-4952. The examiner can normally be reached on 6:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7687 for regular communications and 703-305-7687 for After Final communications.



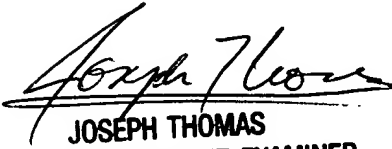
Art Unit: 3626

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-

1113.

V.F.  
V.F.

October 19, 2002

  
JOSEPH THOMAS  
SUPERVISORY PATENT EXAMINER  
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